

## ABSTRACT

A light source apparatus in which an optical arrangement of a light source and a concave mirror is properly adjusted without requiring a large-scale device and a method for manufacturing the same, an adjusting device for adjusting the optical arrangement in the light source apparatus, and a lighting system and a projection display system using the light source apparatus. A lamp housing in which the optical arrangement is adjusted is realized by mounting a tungsten lamp anchoring plate (122), to which a tungsten lamp (121) is fixed, to an ellipsoidal mirror anchoring plate (103) before mounting an arc lamp; moving and fixing a base substrate (104) on a bottom plate (106) so that the diameter of a light spot of light reflected by an ellipsoidal mirror (102) and condensed on an ellipsoidal mirror condensed-state confirming surface (105) at a minimum, the ellipsoidal mirror condensed-state confirming surface (105) being placed at the position where the second focal point of the ellipsoidal mirror (102) should be placed; and removing the tungsten lamp (121) and mounting the arc lamp. Furthermore, a lighting system and a projection display system are constructed using this lamp housing.